PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| Applicant's or agent's file reference BIF116044/DM | FOR FURTHER ACTION | See Form PC | Г/ІРЕА/416 | | | | | |
|---|--|-----------------------------------|------------------------|--|--|--|--|--|
| International application No. | International filing date (day/ | month/year) Priority date (| day/month/year) | | | | | |
| PCT/FR2004/001858 15.07.200 | | 21.07 | . 2003 | | | | | |
| International Patent Classification (IPC) or nation | International Patent Classification (IPC) or national classification and IPC | | | | | | | |
| B81B3/00, H01L21/20, | | | | | | | | |
| BOIDS/OU, HOIDZI/ZU, HOIDZI//UZ | | | | | | | | |
| Applicant COMMISSARIAT A L'ENERGIE ATOMIQUE | | | | | | | | |
| This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. | | | | | | | | |
| 2. This REPORT consists of a total of _ | 6 | sheets, including this cover she | et. | | | | | |
| 3. This report is also accompanied by Al | NNEXES, comprising: | | | | | | | |
| a. (sent to the applicant and | to the International Bureau) a | total of 4 | sheets, as follows: | | | | | |
| sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). | | | | | | | | |
| sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. | | | | | | | | |
| | | | | | | | | |
| b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) | | | | | | | | |
| soluted thereto in computer | , containing a sequence listing and/or tables | | | | | | | |
| related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). | | | | | | | | |
| 4. This report contains indications relati | ng to the following items: | | | | | | | |
| Box No. I Basis of the | report | | | | | | | |
| Box No. II Priority | | | | | | | | |
| | shment of opinion with regard | to novelty, inventive step and in | dustrial applicability | | | | | |
| | ty of invention | - | | | | | | |
| Box No. V Reasoned st | Declaration of the state of the | | | | | | | |
| Box No. VI Certain doc | | | | | | | | |
| Box No. VII Certain defo | | | | | | | | |
| Box No. VIII Certain obs | | | | | | | | |
| Date of submission of the demand | | of completion of this report | | | | | | |
| Date of submission of the deniand | Date | a completion of this report | | | | | | |
| Name and mailing address of the IPEA/EP | | rized officer | | | | | | |
| Faccimile No | Telenl | hone No | | | | | | |

Translation

International application No.
PCT/FR2004/001858

| Box No. I | Basis of the report | | | | | | |
|--|--|---|--|--|--|--|--|
| | ed to the language, this report is based on the internation ander this item. | nal application in the language in which it | was filed, unless otherwise | | | | |
| whi | This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of: international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4) international preliminary examination (Rule 55.2 and/or 55.3) | | | | | | |
| receiving this repor | rd to the elements of the international application, this Office in response to an invitation under Article 14 art): international application as originally filed/furnished description: | report is based on (replacement sheels w e referred to in this report as "originally | nicn nave been jurnished to the y filed" and are not annexed to | | | | |
| pag | | | as originally filed/furnished | | | | |
| pag | es* | | | | | | |
| pag | es* | received by this Authority on | | | | | |
| the | claims: | | | | | | |
| nos | | | as originally filed/furnished | | | | |
| nos | * | as amended (together with a | ny statement) under Article 19 | | | | |
| nos | | 03.0 | 5.2005 with letter | | | | |
| nos | | | | | | | |
| l 🛭 the | drawings: | - · · · - | | | | | |
| she | | | as originally filed/furnished | | | | |
| İ | | received by this Authority on | | | | | |
| | | | | | | | |
| ! — | | | | | | | |
| │ | equence listing and/or any related table(s) – see Supplem | nental Box Relating to Sequence Listing. | | | | | |
| 3. L The | amendments have resulted in the cancellation of: | | | | | | |
| | the description, pages | | | | | | |
| | the claims, nos. | | | | | | |
| | the drawings, sheets/figs | 44.00 | | | | | |
| | the sequence listing (specify): | | | | | | |
| | any table(s) related to sequence listing (specify): | | | | | | |
| 4. Thi | is report has been established as if (some of) the amen y have been considered to go beyond the disclosure as f | dments annexed to this report and listed iled, as indicated in the Supplemental Box | below had not been made, since to (Rule 70.2(c)). | | | | |
| | the description, pages | | | | | | |
| | the claims, nos. | | | | | | |
| | the drawings, sheets/figs | | | | | | |
| | the sequence listing (specify): | | | | | | |
| - | any table(s) related to sequence listing (specify): | | | | | | |
| * If it am A | | | | | | | |
| * If item 4 applies, some or all of those sheets may be marked "superseded." | | | | | | | |

International application No.
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| Box | No. V Reasoned statement citations and expla | t under Ar nations sup | ticle 35(2) with regard to novelty, inventive step or industrial applicability; porting such statement | |
|-----|--|---------------------------|--|-----|
| 1. | Statement | | | |
| | Novelty (N) | Claims | _7 | YES |
| | | Claims | 1-33 | NO |
| | Inventive step (IS) | Claims | _ | YES |
| | | Claims | 1-33 | NO |
| | Industrial applicability (IA) | Claims | 1-33 | YES |
| | | Claims | | NO |
| Į | | | | |

- 2. Citations and explanations (Rule 70.7)
 - 1. Reference is made to the following document:

D3: US 6 156 215 (Canon Kabushiki Kaisha) 5 December 2000 (2000-12-05).

- 2. The application does not fulfil the requirements set forth in PCT Article 6 because claims 1 and 20 are not clear.
- 2.1 The term "structured" in claims 1 and 20 casts doubt on the meaning of the technical features to which it refers. A person skilled in the art would construe the expression "to structure a plate" as referring to the etching thereof. The description in the present application, however, gives an entirely different definition, namely that a surface is structured when it is "essentially incapable of being adhered to another predetermined substrate" (cf. page 6, lines 11-13).
- 2.2 Claims 1 and 20 refer to a "sacrificial layer". A person skilled in the art would construe the

sacrificial layer.

Box No. V

expression "sacrificial layer" as referring to a layer that is at least partially removed during a method. However, no step of removing at least part of said "sacrificial layer" is described in the method as per claim 1. It follows that said layer appears to be an intermediate layer, not a

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;

- 3. The present application does not fulfil the requirements set forth in PCT Article 33(1) because the subject matter of claims 1 and 19 does not comply with the requirement of novelty defined in PCT Article 33(2).
- 3.1 Document D3 describes (cf. figures 1A-1F and column 3, line 18 to column 4, line 57; the references between parentheses apply to said document):
 - a method for producing a stacked structure, characterised in that it includes the following steps:
 - (a) providing a first plate (1) and a second plate (8) and structuring at least one of said first (1) and second (8) plates in such a way that it has, at least in part, a structured surface (cf. figure 1A);
 - (b) producing a sacrificial layer (peeling layer 4 of silicon dioxide) on at least part of the surface (4) of said first plate (1) and/or the surface of said

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

second plate (8); and

- (c) mutually adhering said two plates (cf. figure 1E).
- 3.2 It follows that document D3 also describes a stacked structure characterised in that it is produced using a method as per claim 1.

As a result, the subject matter of claim 19 is not novel either.

- 3.3 The same argument applies *mutatis mutandis* to the subject matter of the corresponding independent claim 20, which is likewise not novel.
- 4. In light of document D3, dependent claims 2, 5, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 24, 27, 29, 30, 31, 32 and 33 do not contain any features which, in combination with the features of any one of the claims to which they refer, might define subject matter that fulfils the PCT requirements of novelty and/or inventive step (see the description relating to figures 1A-1F).
- 5. It should be noted that document D1 still appears to deprive independent claims 1, 19 and 20 of novelty (cf. the first written opinion of the International Searching Authority).

Claims 4 and 23 disclose that a low roughness index of 0.2 nm RMS is considered to be sufficient to "structure" the surface of a plate. Said

limit.

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; ditations and explanations supporting such statement roughness index is so low that both substrates 10 and 30 (cf. D1, figure 5) certainly exceed this

As a result and in light of document D1, dependent claims 2-18 and 21-33 do not contain any features which, in combination with the features of any one of the claims to which they refer, might define subject matter that fulfils the PCT requirements of novelty and/or inventive step (cf. the first written opinion of the International Searching Authority).